A-Q

☞ Always Bring this Book.

Mrs Dyer

IN ACCOUNT WITH

Chas. H. Schoulen

DEALER IN

CHOICE BEEF,

MUTTON, LAMB, VEAL, PORK,

Hams, Bacon, Corned Beef,

TONGUES, ETC.

—:o:—

POULTRY & GAME

IN SEASON.

—:o:—

Goods Promptly Delivered, Free of Expense.

SHOUT
SHARE
IT

OUT

~~texture, semitransparent.~~
~~Pupa Eyes prominent, cases free, the wing cases small. abd. cylindrical slightly tapering. Color clear green the legs colorless, eye black and 2 blackish shadows on the thorax as well as at bases of wing cases. ✓~~
~~An imago June 23. All black.~~

Schizocerus n. sp

Skinner nov.

Schizocerus fumipennis

Ryan

OUT

Sawfly A

(Feb 12 1893

Sawfly on bean *Hosackia grandiflora*
Hd 1mm wide
Yosemite June 1891. Hd rounded,
wider than high, mouth pointed. Clear
green, shaded with black across the
middle, ocelli black, mouth brownish
Tho. feet large, abd. small present
on 5–10 & 13. A slight s-v. ridge
Body trans creased & covered with
round smooth convolutions wart like
elevations. Uniform green, the dorsal
vessel appearing darker; a stigmatal
row of black dots. The anal plate
terminates in 4 pointed short projections
tipped with black, & there are 2 other
below the anus. Tho. feet dusky
The larva is small, length about 10 mm
another anal plate black.
Cocoon formed on the back of a leaf
oblong, rounded, symmetrical, of
coarse
yellowish silk of loose and fluffy

OUT

S F B

V

aquilina
On fern (Pteris) Portland Or. June 1892
sordid
Hd round, pale, whitish with a faint
blackish mottled line from above eye to
vertex; eye large, round, black. Jaws
dark brown. Body, tho. feet large, bent
outward, abd on 6–12 & 13 feet; thickly
annulated, 6 per seg, a dirty translucent
green with a white s d line running
whole length, nearly joining at ends
Spiracles small, black, joined by
a thread like white line being the
tracheae showing by transparency
L 20 mm; w. hd about 1.5 mm.
June 16 turned red & bored in rotten wood
Out May 21, 1893 (Roxbury Mass)
Strongylogaster ~~longulus~~
pacificus

OUT

C

On gooseberry (Nematus ribesii?) Brooklyn
May 30, 1873 mature? Hd wider than
high (1.4 mm) rounded above, flat below
shining black, yellow about the mouth
covered with inconspicuous short stiff
hairs. Abd. feet on 6-11 & 13. Body bluish
green, yellow on 2, 12 & 13 post. The
feet black at base & tip. On each seg. 3 transverse
rows of large elevated shining black spots
each bearing a short stiff black seta
centrally in the following arrangement —
Ant. row of 3 spots, middle of 4,
post. of 4, but irregular & extending
lower down than the middle row;
a large lateral spot bearing 5 setae;
2, contiguous above base of leg, bearing
several setae, minute black dot on
legs. venter immaculate
One shed (sh hd 1.5) splitting the head

Calc.	.51	.73	1.0	1.5	rat. .7
Found	.5	.7	1.0	1.5	1.5
	I	II	III	IV	V

as in pupation (of moth) and came out
without any black spots & immediately
entered the ground. Description of it. (?
without any elevated black spots, and
no setae but minutely pilose. Hd green, eye black w 1.5
Body light green, marked with
yellowish on 2 & 12 & 13 p. Abd. feet present 6-11, 13
{Another hd 1.8 shed, new hd 1.8. The head
comes out of the old one & not from the neck

Imago June 11 ♂♂ ♀♀

Second brood June 30 Egg cylindrical, rounded
at the ends, straight or slightly curved
very shining translucent white, soft,
with only skin, no shell. Skin
collapses after larva hatches.
L. 1.2 mm. width .6 mm Laid length-
wise along the rib of a leaf on
the under side in rows at varying
distances or contiguous. No saw cuts
(cont after F)

OUT

D

~~Sawflies on poplar, Roxbury June 4~~

~~Hd smooth shiny black, a little pale around the mouth or pale testaceous with black eyes. W 1.3 mm Body green, slightly shiny, annulate, abd feet on 6-11 & 13, but very small on 13. 2 trans. rows of elevated black spots, pearly minute on the back, confluent laterally and larger, especially 2 subventral rows. Color leaf green, darker along the back, 12 tinged with yellowish. Tho feet greenish or tinged with black at base. → Spots obsolete post one shed (split) & disappeared. Spots gone.~~

~~Flies before Apr 13, 1894~~

~~Form neat dark brown oval cocoon that on ♀ larger than ♂, in ground~~

Nematus monochroma

Periclista subtruncata EA
nov

Out March 23
1897

On young black oak Van Cortlandt Park, N.Y. May 9 1896.

Hd .6 mm Pale brown dotted on greenish ground a black patch in Δ eye & antennae black. Body light yellowish green, d. vessel dark green, Y-spines paler except the thoracic ones which are black tipped. Feet 6-12 13. Thoracic scarcely visible above, clear with smoky tips.

May 9 Hd .9 Patch on Δ brown Body greener, d. vessel less contrasting.

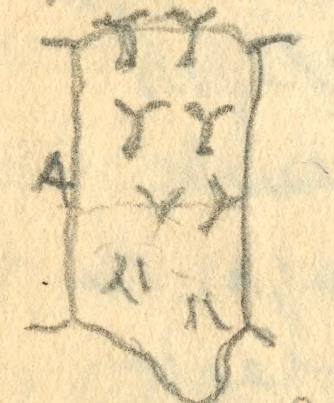
molt May 11 Hd 1.1 green, Δ brownish eye black, mouth brown. Body rather opaque green a little whitish d. from diffuse fat, d vessel darker green. Y spines whitish dusky tipped 2-3, faintly in 14

May 14 Spinning jackets (Sh hds 1.1) Smooth waxy greenish eye black mouth brown shiny indistinctly annulate, d. vessel green

E (1896)

On end of black oak Van Cortlandt Park NY. May 18 1896

Hd V same exactly as E, w. 1.3 ± mm. Length 12½ mm. Feet 6-12, 13 one. Spines not black tipped anywhere.

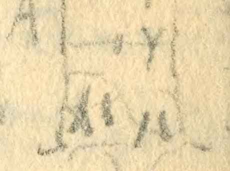


but a little dusky at the ends of body esp on 13. No marks. Scarcely at all annulate.

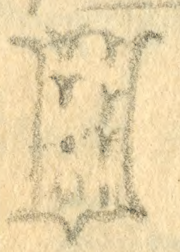
May 22 spinning jacket. Like E but greenish also eye black. Centre of body more yellowish than ends.

Out of Apr 11, 1897 [illegible]

Another VII on black oak Pelham Manor NY. May 18 1897 Spines all pale. Spine same, no single spine behind the spiracle as in 7BA. Hd .7 ±



May V2 Hd 1.2 Shade of twin ocelli patch in Δ single, transverse. Body green spines all pale, same. May 23 patch in Δ double. Spine behind spiracle present, evident ½ in obj though small.



Another Bellport L.I. June 3 1897. Black on head strong but in front, bounds up from edge. Twin spot in Δ. Spines all pale, one behind spiracle evident to lens.

Forms a cell in ground lined with a black secretion

OUT E ~~Klemmeana~~ bipartita

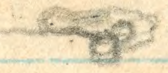
Fly Apr 13 1894

On black oak, Forest Hills. June 4, 1893

Hd wider than high; rounded above, smooth green, eye black with a blackish stripe from end to vertex; & 2 contiguous black spots on upper part of clypeus. Feet on 6-11 & 13. Body smooth, not annulate, S-V region folded. Uniform green with 2 transverse rows per sg. of processes, Y-shaped (ϒ) in a longitudinal plane. They are ① next dorsal, 2; ② s-d 2; ③ s-s 1; ④ ⑤ s-v, small, 1 each, not in line. Sit on the back of a young leaf singly and eat holes flatways. W. hd 1.4?. Length 12 mm. Ant spot. Spines are black tipped. Moult smooth, annulated with slightly elevated concolorous warts in place of processes, inconspicuous. Feet 6-12, 13 post. Pale greenish concolor, head pale testaceous

W. hd 1.4

more on white oak Bronx Park May 22. Darker, more
uniform in same s-v F region with a little lighter
not contrasting. Point vary in distinctness. FA=F 1893

On white oak, Franklin Park June 4
Singly, on the end of a bitten out
midrib  like a young Limacode.
Hd round, flat in front, about as high
as wide & slightly narrowed below, smooth
shiny black; w. 1.3 mm. Abd feet on
6-12, (small on (11 12) and 13 post.
smooth, annulate (3 per seg) with merest
trace of setae as obscure dots under the
lens. Uniform olivaceous blackish, or slate color
above grayish white laterally &
ventrally; the feet black or whitish. In some
a blackish line along bases of legs.
Another had a dead cherry stone
colored head, was all dull sordid
whitish with an olivaceous blackish
broken superstigmatal band.
Curl their post. segments around the
perch and reach out with all the
thoracic feet in the air

Tho. feet pale, black at base. A little brown on head.
May 23 2 to 5 same, shiny waxy. No shed heads seen
No points. Hd dusky black pale on face. Body waxy
greenish, a black lat. shade [illegible] diffuse above,
the sides, slightly [illegible] F went in
ground. Out March 27 1898 [illegible]

Hemichroa paternalis

[illegible] 5 v folds [illegible]

On white oak Pelham Bay Park May 18 1897
Singly but several on same tree each on perch
of tip of midrib from which rest of leaf
eaten off, holds on by thoracic feet and [illegible].
Hd 4 rounded dull dusky, eye black. Body annulate
dull sordid grayish green with short black
points, uniform. A dark line at base thor. feet
Hd .6 sordid whitish gray first, eye black.
Body slate gray, whitish below spiracles as
in next stage.
Hd 1 m leaden black, small. Segs 6-annulate,
black point on 2d and 4th. Body slaty gray,
more or less whitish s-v below spiracle, a
dusky shade along s-v folds. Thor feet
largely black, abd. small 6-12, 13. ~~Whitish~~
waxy grayish white. (Sh hd 1.4)
May 19 Hd 1.4 sordid leaden, Δ and back of face
nearly black antennae & eye black. Dorsum leaden
black ann., short broadly greenish gray dorsally
except in incisures, below spiracle nearly white
the s-v folds marked in blackish forming
a double row of dashes. Thor feet largely
black, abd pale. Segs 6-annulate black
points on 2d and 4th small. Grow rapidly
& much. Later more greenish, dorsum greenish gray
[illegible] at first. May 21 Hd 1.6 Black,
face pale & gray [illegible] or light flesh brown. Body
[illegible] gray greenish, whitish s-v, a lateral
leaden gray shade and ending stig line [illegible]
above, & dusky marks on s-v folds. points black

C (cont)

Stage I Hd large, round, as wide ~~than~~ as ◇ high, translucent shiny whitish eyes black, mouth brown w. .5 mm (full) Body large slender, roughened & covered with very minute short pile, all entirely translucent white. Later the green food contained in the alimentary canal shows by transparency. Length 2½ mm before eating. The larvae reach out along back of leaf & to rib with their hind feet near egg shell & bite a hole through thus forming the beginning of the circular holes in the edges of which they sit. These holes become confluent & reach edge of leaf when the larvae sit on the edge to maturity. Later the head turns blackish & the thor. feet and S-S elevations are shaded with black. W. hd still .5 mm. Holes about 4 mm in diam.

anal prongs short, black.

One hd .7 mm Stage II. Sh. hd. seen by their split like perforations of mouth but apparently almost .5 mm wide. Hd blackish, pale around mouth; mouth dark, shiny with short pile. Body abd ft 6-11, 13. The ft large, marked with black. Body translucent, but green by food, the food absent & a slight yellowish tinge on 2 & 12. 2 trans. rows per seg. of elevated black dots each bearing a short stiff seta. S-S a series of large dots, one per seg. & 2 smaller ones below. Line of spiracles indicated by a white cord seen by transparency. The large wart bears several setae.

Another hd 1.0 Stage III Hd shiny black, a little pale around mouth & clypeus covered with short stiff setae. The legs black with translucent white marks. Anal plate & prongs black. Large elevated smooth black setiferous tubercles. Setae black, short stiff. 2, 12 & 13 post yellowish, the rest of the body whitish appearing green from food. Arrangement of tubercles & structure as in next stage. Length about 8 mm

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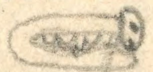
In the egg the larva lies upon its face down ~~back~~, folded up double or normally, the other side up , the head at one end of the egg. They appear to bite a little at the skin & unfold laying there*.

Even just after moulting before the black has come the larvae are green d between 2 & 12 whether food is not all cast out or real color there? Looks like food

*They try to unravel and break the skin at the loop and wriggle out

G OUT

Sawflies on rose, punking the top side all over & sitting flat on venter

Hd higher than wide rounded ◊ wider through eyes. Pale brown, not shiny

Eyes & mouth black. Width 1 mm

Abd feet 6 – 13 post (8 pairs) (not on 13 ant.)

The feet not large. not seen from dorsal view. Smooth sub-translucent yellowish, broadly green d from food, annulate, not shiny without marks. Underlies very slight wr-colored pointed elevation represent the usual dots. There are faintly blackish towards extremities

Another (Shed?) same but no green. All pale ivory yellow, almost whitish Hd 1.0 mm. Alimentary canal first shows blackish

a sh hd 1.0 Perfectly smooth

a 1.1 { Another Hd 1.0, sh hd 1.0.
{ Perfectly smooth & yellow

Imago Oct 28 '94 first annulated, 6 per seg.

Monostegia rosae Har

OUT

H

See Emphytus cinctus (=cinctipes)

Sawfly on rose, eating whole leaf at the edge, rest curled spirally on the back, tail on top. Hd well rounded, flat over clypeus, pale brown, eye large, black* mouth blackish. Not shiny, a blackish smutty stripe on the summit of head, longitudinal, d, but short. (shield 1.5) w. 1.2 mm Body feet 6-12, 13 feet Thr. feet large, seen from dorsal view spreading but not markedly so. Green d, whitish spot along bases of legs rather dark; whitish, subtranslucent s-v & v and on feet. Minute white pointed conical dots on the green part arranged in 3 trans. rows per seg. on the 1, 2, & 4 annulets (6 in all) annulet 1 has 2 each side s-d
" 2 and 4 have 2 s-d, & 2 lat.

* i.e. a large round black spot with a single ocellus in the center of it

These dots also occur s-s but are very inconspicuous on the pale ground color below the white cord of the tracheae showing by transparency. The green color becomes darker just & is interrupted at 12, showing that it is partly due to the food in alimentary canal. Unchanged & entered ground. Hd shiny, slightly punctured, pale straw yellow with large black eye spot. w 1.5 mm Body smooth, 6-annulated, without any tubercles at all, colored as before; D. color bluish green esp. on 2 (but paler) Later bluish shade on vertex of hd & d. color dark green; but hd is shiny & paler brown than before & there are no white dots on the body. Forms cell in ground with no silk; walls not consistent.

Imago, July 31, 1893 Emphytus cinctipes

Packard fig 45 stage 1
5 Rep U.S.E.C. 1887

Calc	.48	.67	.88	1.16	1.52	2.0	rat .76
Found	.5	.7	.9	1.2	1.5	2.0	

Larch sawfly, Woods Holl, Mass July 4, 1893. Hd about as high as wide, full at vertex, flat in front with a dept. like depression center, and a row of 4 transverse large punctures below it. No trace of lobes to head, the vertex centrally outline from before almost circular = very very slightly quadrangular. Entirely shining black. ca. 1.5 mm. Legs 6-11, 13, 6 or [illegible] [illegible] ventral glands, [illegible] body curled over back twisted S-shaped. Sit by thor. feet on a needle (leaf). 3 large annulets above & traces of other smaller ones per seg. Smooth below. Line of tracheae by transparency. Thor. feet shining black with a greenish central band & black dots. Body whitish green, ant

very translucent & only slight shining, apparently unornamented but under lens shows many minute elevated dots, arranged in single transverse rows on the 2 first annulets & on the short lateral (trans.) fold which alternate with these annulets but in three agglomerated patches s-v, the upper ant. (s-s), the lower post. on 2 slight elevation of the skin. (Found also the dead shoot when the eggs had been punched, causing its death) Other lvs 2.0 Hd same shape but differing sculpture in front & less shiny. Clypeus fairly well marked with 2 vertical grooves, somewhat wrinkled & depression on each side of it and one above. Body as before but the

(all dead) Imago May 6 1896
came from N.H.

mm of thin texture, easily indented 9x4

whole dorsal region except on 2 & shaded with blackish green down to the spiracles. Base of the legs blackish green, tip black. Rest of body whitish with green tint. The annulet elevated setiferous dots are pale greenish, slightly metallic, invisible to naked eye. Five (5) annulets, the first one small, not marked, sometimes appearing as less elevated dots set close on 2 & 4 and laterally on 3, also first stig. on 3-4 and 5-stig on the S-V fold.

Another Hd 1.2 same as 1.5 Hd

Another Hd .7 Hd shiny black with some small dents in front. Thor. ft blackish. Body translucent greenish white, the dots scarcely perceptible even with lens. Like a fine black peppering.

Another Hd .9 same other Hd. 5 black shin[illegible] brownish around mouth. Body green & whitish no annulets. Thor. feet large, blackish. Enters ground without molting. Cocoon under

at 5th stage elliptical, of black brown silk, st opaque

OUT

J

(ax Pleuta type
on Black oak & rare)

V

White
^Oak slug on white oak, Woods Holl Mass. July 4, 1893. Hd wider than high, apex pointed but rounded, outline O angularly pyriform, widest through above eyes. Shiny black, smooth, mouth ~~eyes~~ antennae pale, the latter projecting with a seta centrally(?) w. .5 mm. Hd slightly retracted. Body very thick through the seg. Thorax first & then gradually tapering. The feet spreading, but covered to d. view by the wide thorax, blackish ringed, 6 pairs of abd feet, normal, 6-12, 13 feet, but not elevated. Larva rests slug like on back of leaf and [illegible] Body transparent, very shiny, watery, slightly greenish. Food plainly visible. It is really shiny as seen by putting a finger on

Calc .18 .25 .35 .5 .7 Sat. 16
Found .25 .35 .5 .7 .7

but it is not a slug and walks with its feet normally.

First shed hd .25 brown oval, whitish around eye, mouth pale

Same

apparently laid from above & larva mines a gummy 1.5 mm in diam. before hatching

Eggs in circular areas, cut one side between epidermis on under side. Areas about 1.2 mm in diam. Laid near tip

23 of them in this instance a lot of little pimples .2 mm in diam right near them. (Two larvae one hd .5 with a .35 sh hd on leaf; the other hd .35)

Jul 16 Shed: Hd .7 brown & black [illegible] 2.

Body same: tho. feet brown. sh hd .5

July 11 [illegible] .7 New Hd .7 Hd as before rather more rounded but pale whitish yellow, color of honey caramels, eye black, Body not shiny, scarcely more than translucent, same whitish yellow color, marked with orange on the sides of enlarged tho. seg. & with 2 d transverse whitey lines per seg on 5th & post., the and short, just reaching lat., representing the normally interpolated annulets. [illegible]

OUT

K

5 ventral [illegible]
7 pr. abd feet.

White birch s-f, Woods Holl July 5 1893

Head dull at center, well rounded

J

Imago July 25 ex. Sep 1893

Issued from an oval cell formed of grains of earth cemented together by a brown secretion which lines the inside of the cavity. Rather hard but brittle.

Pupa closely resembling the mature insect except that the wings are rudimentary and the color is uniform yellowish white, the eyes black

Monostegia quercus-alba Nort.

over

me; flat
few
of shiny
distally
; smooth,
setae
large,
ly.
dro-
st the
ged the
body
ted
of
ted color ground
heavily shaded
with greenish black, the

Calc .18 .25 .35 .5 .7 Fat .70
Found .2 .25 .35 .5 .7 .7

but it is not a slug and walks
with its feet normally

First [illegible] .25 hours

apparently lai
Eggs in circ
of diam. befo
epidermis
1.2 mm i
230 then
a lot of lit
night near
with a .35
July 16
Sizes: Hd .71
Body same
July 11 [illegible]
but pale w
caramels,
scarcely an
whitish ye

Caliroa
obsoleta
Kh D 1895

ass............................189

9340 9339 9338 9337 9336 9335

on the sides of enlarged the
transverse wider, those pe
and short, just reaching lat. & representing the
normally interrelated annulets. Extend [illegible]

OUT
K

5 ventral [illegible] glands
7 pr abd. feet.

White birch S-f, Woods Holl, July 5 1893
H round, full at vertex, well rounded
not pointed, no trace of suture, flat
in front over clypeus, with a few
slight clypeal dents. Entirely shiny
black, w 1.6 mm. Body indistinctly
4-annulate, watery-shiny; smooth,
no dots, but minute black setae
present there. Thr. feet large,
spreading, black, pale centrally.
abd. on 6-11, 13, with a medio-
ventral eversible gland, just to
each pair 6-10. Gland longer than
wide, colored rather darker than body,
when disturbed body elevated
S-shaped or & glands quickly
everted & retracted (color growing)
ivory-yellow heavily shaded
with greenish black, the

cale
found

yellow appearing on 2 ant & on abd
legs, and stigmatally.

Next Stage Hd 2.2 Same but smooth,
no other distinguishable. 2, the
d & stig irregular bands & abd. feet
honey yellow, leaving the black
shading most distinctly s-d and
substigmatally, forming a series of
very black s-d patches, or spreading
largely over the body. It is shining black.

July 11 Emptied intestines like Platysamia
& entered ground. No shed skin seen

Cocoon beneath ground, elliptical,
rather thick, opaque, black, 11 × 4½

Cale .37 .53 .75 1.08 1.54 2.2 ratio .70
Found .4 .55 .75 1.05 1.6 2.2

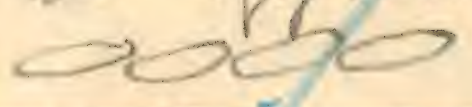
Imago Aug 1893 Craesus latitarsus

.31 .42 .56 .76 L 1.0 1.4 (1.9) rat .74
.3 .4 .55 .75 1.1 1.4 1.4-7

OUT

Alder sawflies, Woods Holl, July 8, 1893

K.

Eggs on white birch Aug 9 1893
Laid closely along the midrib or larger veins x
on the under side about ½
enclosed in central cuts which
they have swelled out so that
the eggs touch obliquely
 soft translucent
white 1.4 × .6 mm (minute, [illegible] times x bodies)
Stage hd (sh bd .4) .4 w .45 Eating holes
confluent in leaf near egg shell
& reaching body. Hd round
a little higher than wide, full
at vertex, shining black
Body light shining greenish
Tubercles very obscure, not
setiferous, only the s-v distinct
those nearly concolorous with
body, large, rounded, 1 pr seg.

of [illegible] size, [illegible] sub-
ventrally in the black patches

Calc	.31	.42	.56	.76	L	1.0	1.4	(1.9)	nat .74
Found	.3	.4	.55	.75		1.1	1.4	1.4-7	

OUT

together appearing on 2 and 4 on abd.

Alder sawflies, Woods Holl, July 8, 1893

Thx. gx. blackish seg. obscurely annulate. The alimentary canal gives a greenish shade
(Lots of .75 sh. hds in cam)
Aug 5 Hds. .75 very smooth even brownish black, pale above mouth. Body olive green, the s-v ridge and feet blackish. Body shining, annulate, smooth; no setae seen.
Molt Aug 7 [Sh hd .75, new hd 1.05]
Hd black, thx. ft. black except at joint. Body same.
[Aug 7 found plenty of both .55 and .75 sh. hds in the cam, but could not demonstrate any .4. Do they have this stage?]

Cloesus latitarsus Norton

On black birch Jefferson Highlands N.H. June 26 1895. Well grown.

Calc..
Found .4 .55 .75 1.05 1.6 2.2

Imago Aug 1 1893 Croesus latitarsus

[illegible] laterally in the black patches

Calc
Found

yellow appearing on 2 ant. & on abd.
legs. a
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July 11
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cocoon b
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L
Imagos before Aug 13 1893
Hemichroa n. americana sp.
Cocoon beneath ground, thin-walled, brown with no distinct threads, crusty, brittle, elliptical 8 x 4 mm.
Pupa Like fly but wings rudimentary all brownish yellow the legs, coxae & antennae darker. Eyes blackish.

Hemichroa americana Prov.

Alnus serrulata

Calc..
Found .4
Imago Aug 1 1893 Craesus latitarsus

.31 .42 .56 .76 L 1.0 1.4 (1.9) nat .74
.3w .4 .55 .75 1.1 1.4 1.4-7
OUT

Alder sawflies, Woods Holl, July 8, 1893
Eggs in saw cuts on petiole & base of midrib below, lateral lids opening below, on one or both sides of stem, nearly contiguous
Eating holes in the leaf between ribs when older large. ✓ (See Blue book)
Some big ones had hds 1.5 or +
Stage I hd 1.4 well rounded, slightly pointed at vertex, not conspicuously flattened before, shining black, sparsely pilose ✓ the feet spreading, black, pale at points Abd-feet on 6-12, 13 foot. Body smooth, annulets creased, not shining, subtranslucent greenish ochre with an even continuous black lateral line ant. geminate interrupted s-v one. 2 trans rows of smooth inconspicuous concolorous setiferous tubercles of moderate size, arranged sub-ventrally in the black patches

Lash first part of body vigorously
but apparently not to evert glands
venter pale. 2 & 13 first darker ocher

Stage hd 1.1 Same, but hd pale, more brownish & the feet only marked with black. Hd somewhat densely pilose body tubercles brownish tinged.

Stage hd .75 Hd blackish brown, eye black, shiny, minutely pilose. Tho. feet pale. Body marked same, but the tubercles are larger in proportion & the d. & black patches are rounder & more evidently covering the ant. & post patches of tubercles.

Stage hd .55 Hd brown eye black, mouth dark. shiny. Body greenish yellow, rather [illegible] & only slightly shiny. Th. feet slightly marked with black, a trace of [illegible] a broken s.s. line on body, most distinct centrally. Setiferous tubercle blackish

[Ones hd .4 were hd .55]

Stage ~~hd .45~~ Hd pale brownish, eye black mouth brown, smooth. Body rather dark honey yellow, subtranslucent not shiny, greenish tinged. Two trans. rows of tubercles, with very minute setae (subconical), quite large & distinct, blackish.

Stage hd .30 eating a little hole in leaf. Hd rounded, higher than wide, pale brown eye black. Body curled S shaped outside the hole on one side or the other. Larva moves readily through it. Annulate, translucent honey yellow, not very shiny; alimentary canal giving a greenish tinge (some at hd 1.4 Larva

hd 1.4 Same but smooth, minute [illegible] (see p 29)
[illegible] areas, [illegible]
[illegible] Color [illegible]
[illegible] al. canal is empty). Black marks [illegible]

(X) 1.4 hds of 2 larvae entering ground

Ontario, hd ~~1.9~~, 1.4, 1.5 (error for 1.5?) Shady 1.4 1.1 1.4 1.4 1.1 1.4 1.0+1.1 1.4 1.4 1.1 1.4 1.4 Parry S[illegible]

Calc.	.24	.34	.48	.69	.98	1.4	2.0	rat.
Found	.25	.33	.5	.7	1.0	1.4	2.0	

Also on Prunus serotina
Jefferson Highland N.H.

M OUT

Sugar plum sawflies on Amelanchier canadensis, Woods Holl, Mass., July 8, 1893 punching the leaves in small scattered patches from the under side.

Stage hd 1 mm, round, smooth, shiny, greenish ~~testaceous~~ eye black, mouth brown; prominent projecting, not at all retracted. Thorax a little enlarged, the feet spreading widely, not concealed, abd. slightly tapering post. gradually from the thorax. Feet 6-11, 13. Segs 4-annulate, smooth, without tubercles, not shining. Of a pale clear green, the alimentary canal showing dark green. The feet greenish watery. abd feet short, concolorous, with pale s.-v. region, anal plate rounded

Stage hd .5 Same but pale throughout

Same at Plattsburgh N.Y. Sept 1. Same, hd 2.0 but both hd & body slightly white bloom obscuring surface of body.

the head almost whitish. ♀2 is small hive [illegible] out the head prominently,

[Hds 1.5, 1.4, 1.0, 1.0, 2.0, 1.4, .5, .7, 1.0, 1.5, .5]

Stage hd 2.0 Hd light testaceous, faintly brownish, smooth, shining, minutely reticulated. Eye black, mouth brown; held forward, [illegible], thorax slightly thickened both up & sideways, abd slightly tapering, the feet spreading. Same hd in stage 1 mm surface smooth, but not shining.

~~Stage hd 1.4 Same as stage 1.0~~

Stage hd .7 Much as in 1.0, but paler. Same in all points but color darker than .5 st.

Big larva eats the whole leaf, but still rests on the back. At hd 2.0. Largest st hd 1.5+

Mat. feeds [illegible] whitish with bright green dorsal band

St hd .25 round, higher than wide but not narrowing to vertex, shiny, eye black, mouth brown.

Stage hd .33 Similar. Eye on black spot. smooth brown. Hd rather higher.

Cocoon in surface of ground, light brown, rather thin & flexible 4 x 8 mm., double, inner larger brown outer thin

Fly out Apr 23 1894.

♀ Nematus thoracicus

=1F
July 2
1899

N

Willow sawflies. Woods Hole July 6. On Salix, solitary on back, sitting flat, eating end of leaf from below, eats whole leaf.

Stage hd 1.0 mm ... wider than high, mouth projecting, shining black with a few hairs. Body of uniform width, rather wider than high, slightly smaller at both extremities. A large, conspicuous black anal plate. The, low, obscure but rather large watery tubercles bear evident stiff recurved long on first row, short on 2nd row simple white hairs. Body pale honey yellow shading into orange on 2-3, 12-13. A row of large round seg-ed black spots & a similar smaller subventral row. Abd. feet 6-11, 13 pairs, thor. feet slightly shining, not conspicuous from above, pale or blackish tipped.

[illegible]

5th hd 1 mm reached 1.5 Same hairs nearly but not at caudal

OUT

5 ventral glands 6-10, longer than feet, black

O

(beaten hazel nut)

Saw fly on alder-like-stuff with

with II

V

O

Calc.	.30	.43	.62	.88	1.26	1.8	r.70
Found		.45	.65	.9	1.25	1.8	

~~Other Aug 5, 1893~~

~~Stage hd .9* mm Hd round, shining, very black. Body shining, creased, flaccid & annulate, smooth with minute setae seen with lens. Uniform slightly ... green without marks; but thor. feet marked with black at base and tip and a series of large obscure patches ventrally on 6-10~~

~~Stage hd 1.25 Flat before with ... dents; shining black segs shining & annulate, setae minute, very slightly showing~~

*The change to .9 made before calculating

Pupa by July 25, 1893 Kerxiatus Caryleus

=1F

N

July 1899

Willow sawflies. Woods Holl July 8. On

Salix

concolorous bases. Olivaceous green, shaded with leaden blackish s-d and on s-v ridge. Venter blackish with eversible glands as in mature larva abd feet 6-11, 13 post.

Egg in central confluent incision along back of midrib, the egg appearing to have swollen out the cut and been slightly alter-nating they were so close ~~[illegible]~~ They may have been .9 x .4 mm, could hardly have been more.

Same hair as all, but not ab. canal

OUT

O

(beaten hazel nut)

5 ventral glands 6-10, longer than feet, black

II

V

Plattsburgh N.Y., Aug 31, 1893. On hazel a ch hd. ⊙ .5 mm, black. Larva stage hd. .65 shiny blackish, rounded, eye black, mouth a little paler. Body shiny, annulate, whitish, the al. canal giving a distinct light green shade. The feet largely black, a row of blackish spots along s-v ridge. a pair of black anal conical points abd. feet 6-11, 13. no tubercles
⊙ remeasurement gave .45. It was rather badly spread.

Imago by July 25, 1893 Croesus laticulus ~~Nematus~~ corylus

N

=1F

July 1899

Willow sawflie. [illegible] July 8. On

Salix,

leaf

stage

project

Body,

high,

black,

among

the,

tubercl

ovip

yellow

12-13,

black

vent

ser

Ofu

black with tinged, Same hairs all but not so small

---

5 ventral glands 6-10, longer than feet, black

OUT

O

(beaked hazel nut)

Saw fly on alder-like-stuff with II V

[illegible] like tree, shrub **Corylus rostrata**

stage 18 40 worms, a row of [illegible] indentation bordering clypeus - entirely shiny black body normal, curved S-shaped for defence when attacked on edge eaten. Abd. feet 6-11, 13. Two feet spreading. Body segs. coarsely 4-annulate, smooth, shiny. tubercle represented by minute dark setae. Color honey brown, darker in [illegible] spiracle area and [illegible] elevation [illegible] with glandulous black. The feet pale tinged with black. [Greatly resembles birch saw fly (K) but the color is a pure watery amber brown, the black head on]

Entered ground apparently without molting

Cocoon between layers of paper that held the ground. Thin, paper-like but shiny, opaque black, elongate oval 8×3.5 mm.

Imagos by July 25, 1893 Croesus latitarsus Nematus Corylus

Abundant in mature stage
on willow Jefferson Highlands
N.H. July 1. 1895
n.sp.

OUT 5 eversible pale yellow
ventral scent glands
behind feet 6-10

SCENTED WILLOW SAWFLY ~~[illegible]~~

Willow sawflies Woods Holl, July 8, 1893

Gregarious edge eaters, body whackers
without eversible ventral glands.

Eggs laid in masses on under side of leaf
on surface, not sawed at all, the dried
empty skin .8 x .4 mm in size

Stage hd 1.4 Hd well rounded, differs large
quadrate smooth, shining black, the
suture & structure below (a 2d ocellus?) ocellus honey yellow. Body
normal for whackers, terminal segs.
somewhat smaller. Thr feet large, abd
on 6-11, 13 post, the last small; a black
anal plate with terminal pair of
spines. Segs 4-5 annulate, smooth
slightly shining, the tubercles obsolete
d but represented laterally & s-v by large
smooth rounded shiny black
prominence, much larger s-v.

Calc	.34	.48	.69	.98	1.4	ratio .70
Found	.3	.5	.7	1.0	1.4	

a d & s-d row of irregular edged, round
black spots, 4 per seg. in straight line, not shining like the s-v tubercle
Body light green, 2, 12, 13 post orange.
venter orange tinted. Thr feet black
except at joints, abd. green

~~Stage hd 1.0 Same, black marks smaller~~

Went down without shed hides seen
(Head hd. in coc 1.4 mm) Coc beneath
ground, thin, elliptical, black, of
uniform texture not showing thread,
hymenoptera like. 6-7 x 2½-4 mm

Others Aug 4 St hd .3 round black as in
.5 stage eating holes near eggs ✓. Hd rounded
pale at vertex black. Body belt S-shaped
Thr feet blackish. Body annulate shiny green
ish yellow, pale, the 2 rows of s-v tubercle
visible, smoky, now green dorsally. Anal
plate small, black

Imago Aug 5 (St hd .5?) Hd .7 same black anal
plate & similar spines. Lat & s-v tubercles
blackish. s-d black spots faintly indicated

Imagos before Jul 28 1893 feeder scent very evident
Light green, 2, 12, 13 post
dorsum yellowish

NEMATUS sp.

Calc.	~~.43~~	.55	.71	.91	1.2	1.6	2.1	2.9
Found		.55	.7	.9	1.2	1.6	2.1	2.5

Q

Prunus serotina, Prunus maritima

Wild cherry web sawflies, Woods Holl July 4

Spinning a dewy-beaded web among the leaves. Web thin, dew drier smaller

Some sh. hds 1.1 & 1.15 black; .7 dark brown

Eggs laid in a mass on back of leaf without saw cuts. Hides found, and one unhatched, elliptical, probably white (yellowish) Length 1.2 mm, W. .4 mm. Others 1.6 x .6 white

Hd .55 rather higher than wide, round smooth, sutures very faint, but clypeus apparently not quite as high as vertex; antennae very short, scarcely perceptible, in front of the large black ocellus. Color dark brown, pale in front

Sh hd .7 or .75±? Clypeus very large but not attaining vertex. Small pointed jointed antennae in front of ocellus. Color blackish brown, darker in side

at .76

Just hatched June 15 1896 Van Cortlandt Park N.Y. Hds .5± Hd blackish brown pale in face, anal pl. & processes dusky. Body all whitish yellow, annulate, slightly shiny

Sh. hd .9? Much as before, but rather darker and antennae more prominent

Sh hd 1.2 Clypeus very large , upper side pieces small, not reaching half way down, lower side piece large bearing a 5-jointed pointed antenna before ocellus & a little above. Hd very shining black with brown shade. Mouth parts projecting. Hd smooth, clypeus slightly indented.

Stage hd 1.6 Hd large round, rather wider than high; clypeus large hood, 3/4 to vertex. Antennae with large insertion before eye, 5-jointed, .5 mm long, terminal joint pointed; labrum large, palpi rather small distinctly jointed. Color shiny black. Body slightly flattened with distinct s-v folded ridge. Tho feet small, 4 jointed, pointed, black, no larger than antennae

for species June 18 shed Same hd, orange tinted ant; [illegible] stripes June 2[illegible] (orange stripes)

(The 2 ends look alike Both shiny
black with conspicuous jointed appendages)
and useless. No abdominal feet
but a pair of 3 jointed pointed (ventral)
black appendages, rather longer than
ant to black plate
the thoracic feet on joint 13 just S-V.
more lateral than ~~tho.~~ feet
Segments coarsely 4-annulate smooth
Body opaque dull greenish with an
orange next d band, a medio ventral
band & broad markings following
the outlines of the lateral and S-V
foldings. Anal plate black as
also 13 just. ventrally. watery ~~[illegible]~~ S-sh.
A slight ventral prominence on 12 repre-
senting feet but without any trace of feet
Another bd 2.2 Same Ant. 9mm long. Color
greenish orange, the lines true orange
Stage bd 1.2 Same except. dorsal anal
plate absent centrally. Obscure watery c-sh
body all orange medio ventral bright
Later marked as in most. Ant dens distinct
molt July 18 sh bd 2.2. new bd 2.5? Body and
greenish with orange bands as before

ed the feet, such as
with [illegible] cerci(?) [illegible] out-
anal plate shiny black
but the [illegible] is [illegible]
[illegible] with a black mark
has a central greenish
orange spot with cres-
centic, blackish
July 22 Found emerged
green with one trace of
orange marks which dry after web
and instead ground
Black [illegible] [illegible]
not much
Breadth 2.4, 2.55 2.50 2.5 2.1
width subanal plate 2.4 mm